

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 84-13

AMENDING NPDES PERMITS FOR THE CITIES OF
SOUTH SAN FRANCISCO AND SAN BRUNO ORDER NO. 82-16 AND
SAN FRANCISCO INTERNATIONAL AIRPORT ORDER NOS. 79-162 AND 81-18

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board), finds that:

1. The parties listed below, hereinafter called the dischargers, have previously been issued NPDES permits by this Board in the Orders indicated:

<u>Discharger</u>	<u>NPDES No.</u>	<u>Order No.</u>	<u>Expires</u>
Cities of South San Francisco and San Bruno	CA0038130	82-16	4/15/87
San Francisco Intern'l Airport Water Quality Control Plant	CA0038318	79-162	12/18/84
San Francisco Intern'l Airport Industrial Waste Treatment Plant	CA0028070	81-18	4/15/86

2. The North Bayside System Unit (NBSU) is the Joint Powers Authority responsible for operation of certain shared transport, treatment, and disposal facilities. The NBSU includes Millbrae, Burlingame, South San Francisco, San Bruno, San Francisco International Airport, and Calgon Corporation.
3. Treated wastewater from the NBSU is discharged into lower San Francisco Bay, a water of the State and United States, northeast of Point San Bruno through a submerged diffuser about 5300 feet offshore at a depth of 20 feet below mean lower low water. (37°, 39 min., 55 sec., Latitude; 122°, 21 min., 41 sec., Longitude)
4. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on July 21, 1982. The Basin Plan contains water quality objectives for San Francisco Bay and contiguous waters. Amendments to the above NPDES permits are required to bring them into compliance with the revised Basin Plan.
5. The beneficial uses of lower San Francisco Bay and contiguous water bodies are:
 - ° Water contact and non-contact water recreation
 - ° Wildlife habitat
 - ° Preservation of rare and endangered species
 - ° Estuarine habitat
 - ° Fish migration and spawning
 - ° Industrial service supply

- ° Shellfish harvesting
 - ° Navigation
 - ° Commercial and Sport Fishing
6. The Cities of South San Francisco and San Bruno have submitted an application for a waiver of secondary treatment requirements during periods of wet weather in accordance with Section 301(h) of the 1981 Amendments to the Clean Water Act. Additional information is needed on the magnitude and frequency of excessive wet weather flows, overflows, and bypasses and on the wet weather capacities of the treatment plant, pump stations, and collection system in order to evaluate the discharger's application.
 7. Order No. 81-18 allows San Francisco International Airport the nearshore discharge of stormwater runoff in excess of treatment and storage capacity. Discharges from Drainage Pump Station Nos. 1 and 2 during 1983 contained high concentrations of certain pollutants as documented in self-monitoring data. The source of these pollutants is unknown, but is likely from direct industrial discharges and/or non-point source contaminants. A pretreatment program and strategy of best management practices need to be developed and implemented by the Airport to minimize the discharge of pollutants to the Airport's drainage system and to San Francisco Bay.
 8. Operations and Maintenance Manuals are maintained by the dischargers for purposes of providing plant and regulatory personnel with a source of information describing all equipment, facilities, and recommended operating strategies, process control monitoring, and maintenance activities. In order to remain useful and relevant documents, these manuals should be kept updated to reflect significant changes in plant facilities or activities.
 9. This Order serves to amend NPDES permits and as such is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.
 10. The discharger and interested agencies and persons have been notified of the Board's intent to amend requirements for the existing discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.
 11. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Effluent Limitations of Order Nos. 79-162 and 82-16 are replaced in total by B.1 through B.6 below and B.6 is added as an Effluent Limitation to Order 81-18. Receiving Water Limitations C.1 through C.3 replace in total the limits in these Orders and Provisions D.1 through D.8 are added as indicated below:

B. Effluent Limitations for Discharge into the Combined Forcemain-Outfall

1. Effluent discharged shall not exceed the following limits:

<u>Constituents</u>	<u>Units</u>	<u>30-day Average</u>	<u>7-day Average</u>	<u>Maximum Daily</u>	<u>Instantaneous Maximum</u>
a. Settleable Matter	ml/l-hr	0.1	-	-	0.2
b. BOD ₅ or	mg/l	30	45	60	-
Carbonaceous BOD ₅	mg/l	25	40	50	-
c. Total Suspended Solids	mg/l	30	45	60	-
d. Oil & Grease	mg/l	10	-	20	-
e. Total Chlorine Residual(1)	mg/l	-	-	-	0.0

(1) Requirement defined as below the limit of detection in standard test methods. Compliance with this limitation may be demonstrated at the NBSU dechlorination facility.

2. The arithmetic mean of the biochemical oxygen demand (5-day, 20°C) and suspended solids values, by weight for effluent samples collected in a period of 30 consecutive calendar days shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected approximately the same times during the same period (85 percent removal).
3. The pH of the discharge shall not exceed 9.0 nor be less than 6.0.
4. The survival of test organisms acceptable to the Executive Officer in 96-hour bioassays of the effluent shall achieve a 90 percentile value of not less than 50% survival based on the ten most recent consecutive samples. Samples may be dechlorinated in the laboratory prior to testing to provide a chlorine residual equal to that of the waste as discharged from the NBSU dechlorination facility.
5. Representative samples of the effluent shall not exceed the following limits:⁽¹⁾

<u>Constituent</u>	<u>Unit of Measurement</u>	<u>6 month Median</u>	<u>Daily Maximum</u>
Arsenic	mg/l	0.01	0.02
Cadmium	mg/l	0.02	0.03
Total Chromium	mg/l	0.005	0.01
Copper	mg/l	0.2	0.3
Lead	mg/l	0.1	0.2
Mercury	mg/l	0.001	0.002
Nickel	mg/l	0.1	0.2
Silver	mg/l	0.02	0.04
Zinc	mg/l	0.3	0.5

<u>Constituent</u>	<u>Unit of Measurement</u>	<u>6 month Median</u>	<u>Daily Maximum</u>
Cyanide	mg/l	0.1	0.2
Phenolic Compounds	mg/l	0.5	1.0
Total Identifiable Chlorinated Hydrocarbons(2)	mg/l	0.002	0.004

(1) These limits are intended to be achieved through secondary treatment, source control and application of pretreatment standards.

(2) Total Identifiable Chlorinated Hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other identifiable chlorinated hydrocarbons.

6. During the months of May through September the moving median value for the MPN of total coliform in any five (5) consecutive effluent samples shall not exceed 23 coliform organisms per 100 milliliters. Any single sample shall not exceed 240 MPN/100 ml.

During the wet weather months of October through April inclusive, effluent shall not exceed a five sample moving median of 240 MPN/100 ml nor a single sample maximum of 2400 MPN/100 ml.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
 - b. Bottom deposits or aquatic growths;
 - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
 - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

- | | | |
|----|--------------------|--|
| a. | Dissolved oxygen | 5.0 mg/l minimum. Median of any three consecutive months shall not be less than 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen. |
| b. | Dissolved sulfide | 0.1 mg/l maximum |
| c. | pH | Variation from natural ambient pH by more than 0.5 pH units. |
| d. | Un-ionized ammonia | 0.025 mg/l as N Annual Median
0.4 mg/l as N Maximum |

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Provisions

1. The requirements prescribed by this Order supersede the referenced requirements prescribed by Order Nos. 79-162, 81-18 and 82-16.
2. Where concentration limitations in mg/l are contained in this permit, the following mass emission limitations shall also apply as follows:

Mass Emission Limit in lbs/day = Concentration limit
in mg/l x 8.34 x Actual Flow in mgd averaged over the
time interval to which the limit applies.

3. The discharger shall comply with all sections of this order immediately upon adoption.
4. The Cities of South San Francisco and San Bruno shall document compliance with Prohibition A.2 of Order No. 82-16 by preparing a Wet Weather Flow Management Plan to be approved by the Board and amended, as necessary, to the satisfaction of the Executive Officer.

5. The Cities of South San Francisco and San Bruno shall document compliance with Provision D.4 and with the long term goal of providing secondary treatment for all flows and eliminating all overflows according to the following schedule:

<u>Task</u>	<u>Compliance Date</u>	<u>Date Report Due</u>
a. Submit Wet Weather Flow Management Plan, acceptable to the Executive Officer, for sewer maintenance, repair, and replacement and other facility construction to reduce, control, or eliminate excessive wet weather flows and overflows. Quarterly status reports shall be submitted during development of this plan	July 1, 1985	June 15, 1984 September 15, 1984 December 15, 1984 March 15, 1985 (Quarterly Status Reports) July 15, 1985 (Final Report)
b. Submit annual progress reports quantifying any sewerage system improvements and their impacts on compliance, wet weather flow quantity, overflow/bypass frequency, and summarizing proposed actions for coming year	July 1 (each year from 1986 until full compliance is acheived)	July 15 (each year)
c. Submit proposed plans and schedule for proceeding with a joint NBSU wet weather 301(h) application and plan of study for receiving water monitoring		45 days after revised definition of secondary treatment is published as final regulations

6. The San Francisco International Airport shall document progress towards minimizing the discharge of polluted stormwater from Airport property according to the following schedule:

<u>Task</u>	<u>Compliance Date</u>	<u>Date Report Due</u>
a. Develop Federal Pretreatment Program		
1. Submit user survey, legal authorities, procedures and funding provisions as specified by 40 CFR 403.8 and 403.9	May 1, 1984	May 1, 1984

<u>Task</u>	<u>Compliance Date</u>	<u>Date Report Due</u>
2. Submit complete program and request for Board approval	July 1, 1984	July 1, 1984
3. Implement program	August 1, 1984	August 1, 1984
b. Submit plan of study, acceptable to the Executive Officer, for identifying sources, quantities and composition pollutants entering the Airport stormwater drainage system	June 1, 1984	June 1, 1984
c. Submit plans for monitoring and surveillance to ensure prompt detection and clean-up of illegal or accidental discharges to the drainage system, including operation of the first flush retention ponds in wet and dry weather, drainage pump station sampling, and best management practices to be implemented to minimize pollutant loading from non-point sources	Sept. 1, 1984	Sept. 1, 1984
d. Install automatic samples capable of collecting discrete representative samples in glass bottles of the discharge from drainage pump stations No. 1 and 2, and document plans for monitoring and cleaning drainage station sumps	Forthwith	April 1, 1984
7. The discharger shall review and update his Operations and Maintenance manual annually, or in the event of significant facility or process changes, shortly after such changes have occurred. Annual revisions, or letters stating that no changes are needed, shall be submitted to the Regional Board by April 15 of each year. A time schedule for completion of the initial revision shall be submitted by April 15, 1984. Documentation of operator input and review shall accompany each annual update.		
8. The discharger shall review and update by April 15, 1984 annually its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.		

I, Roger B. James, Executive Officer do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on March 21, 1984.

ROGER B. JAMES
Executive Officer

Attachments:
Standard Provision &
Reporting Requirements, April 1977
Self-Monitoring Program
Resolution 74-10

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

REVISED

SELF-MONITORING PROGRAM
FOR

SAN FRANCISCO INTERNATIONAL AIRPORT - WQCP

NORTH BAYSIDE SYSTEM UNIT

SAN MATEO COUNTY

NPDES NO. CA 0038318

ORDER NO. 84-13 & 79-162

CONSISTS OF

PART A, dated January 1978

AND

PART B

PART B

SAN FRANCISCO INTERNATIONAL AIRPORT WQCP AND NBSU

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT AND INTAKE

<u>Station</u>	<u>Description</u>
A-001	At any point in the treatment facilities headworks at which all waste tributary to the system is present, preceding any phase of treatment, and exclusive of any return flows or process sidestreams.

B. EFFLUENT

<u>Station</u>	<u>Description</u>
E-001	At any point in the plant after disinfection between the point of discharge into the combined outfall and the point at which all waste from the treatment plant is present.
E-002	At any point in the combined outfall after dechlorination between the point of discharge into San Francisco Bay and the point at which all waste tributary to that combined outfall is present.

C. RECEIVING WATERS

<u>Station</u>	<u>Description</u>
C-1	At a point in San Francisco Bay located over the geometric center of the outfall's discharge ports.
C-2	At a point in San Francisco Bay located midway between C-1 and C-3.
C-3	At a point in San Francisco Bay located in the center of the waste plume.
C-50-SW	At a point in San Francisco Bay, located 50 feet southwesterly, along the outfall line shoreward from Station C-1.
C-50-NW	At a point in San Francisco Bay, located 50 feet northwesterly from Station C-1, normal to the outfall line.

C-50-NE	At a point in San Francisco Bay located 50 feet northeasterly from Station C-1, along the outfall line extended.
C-50-SE	At a point in San Francisco Bay located 50 feet southeasterly from Station C-1 normal to the outfall.
C-300-N through C-300-NW (8 stations)	At a point in San Francisco Bay located on a 300 foot radius from the geometric center of the outfall diffuser, at equidistant intervals, with Station C-300-SW located shoreward from Station C-1 at the outfall line.
C-R-NW	At a point in San Francisco Bay located approximately 1500 feet northerly from the point of discharge.
C-R-SE	At a point in San Francisco Bay, located approximately 1500 feet southeasterly from the point of discharge.

D. LAND OBSDERVATIONS

<u>Station</u>	<u>Description</u>
P-1 through P-'n'	Located along the periphery of the waste treatment or disposal facilities, at equidistant intervals, not to exceed 100 feet. (A sketch showing the locations of these stations will accompany each report).

E. OVERFLOWS AND BYPASSES

<u>Station</u>	<u>Description</u>
OV-1 through OV-'n'	Bypass or overflows from manholes, pump stations, or collection system.

NOTE: Initial SMP report to include map and description of each know bypass or overflow location, and report on pump station alarms, pumping capacity, upstream storage capacity and bypass location.

Reporting - Shall be submitted monthly and include date, time, and period of each overflow or bypass and measures taken or planned to prevent future occurrences (see Part A, Section F.2).

II. SCHEDULE OF SAMPLING AND ANALYSIS

A. The schedule of sampling and analysis shall be that given as Table I.

I, Roger B. James, Executive Officer, do hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order Nos. 84-13 and 79-162.
2. Is effective on the date shown below.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

ROGER B. JAMES
Executive Officer

Effective Date: March 29, 1984

Attachments:

Table I and Legend for Table

Order No. _____

TABLE I
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS ¹⁾

Sampling Station	A-001	E-001			E-002			All Sta C	All Sta P				
TYPE OF SAMPLE	C-24	4) G	4) C-24	Cont	G	5/ C-24	Cont	10) G	O				
Flow Rate (mgd)				Cont			Cont						
BOD, 5-day, 20° C, or COD (mg/l & kg/day)	2/W		3/W			5/W							
Chlorine Residual & Dosage (mg/l & kg/day)		2H	8) or Cont		2H	8) or Cont							
Settleable Matter (ml/1-hr. & cu. ft./day)		D			D								
Total Suspended Matter (mg/l & kg/day)	2/W		5/W			5/W							
Oil & Grease (mg/l & kg/day)	2) M	2/ M			2/ 2M								
Coliform (Total or Fecal) (MPN/100 ml) per req't		3/W			5/W			3/ M					
Fish Toxicity, 96-hr. TL ₅₀ or % Survival in undiluted waste			6) 2/M			5/ M							
Ammonia Nitrogen (mg/l & kg/day)	2/M		9) 2/M			9) M							
Nitrate Nitrogen (mg/l & kg/day)			9) 2/M			9) M							
Nitrite Nitrogen (mg/l & kg/day)			9) 2/M			9) M							
Total Organic Nitrogen (mg/l & kg/day)	2/M												
Total Phosphate (mg/l & kg/day)													
Turbidity (NTU)			D			M		M					
pH (units)		D			D			M					
Dissolved Oxygen (mg/l and % Saturation)		D			D			M					
Temperature (°C)		D			D			M					
Apparent Color (color units)													
Secchi Disc (inches)								M					
Sulfides (if DO < 5.0 mg/l) Total & Dissolved (mg/l)		D			D			M					
Arsenic (mg/l & kg/day)			7) Q										
Cadmium (mg/l & kg/day)			7) Q										
Chromium, Total (mg/l & kg/day)			7) Q										
Copper (mg/l & kg/day)			7) Q										
Cyanide (mg/l & kg/day)			7) Q										
Silver (mg/l & kg/day)			7) Q										
Lead (mg/l & kg/day)			7) Q										

TABLE I (continued)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A-001	E-001			E-002			All C Sta	All P Sta	All OV Sta			
TYPE OF SAMPLE	C-24	G	C-24	Cont	G	C-24	Cont	G	O				
Mercury (mg/l & kg/day)			7) Q										
Nickel (mg/l & kg/day)			7) Q										
Zinc (mg/l & kg/day)			7) Q										
PHENOLIC COMPOUNDS (mg/l & kg/day)			7) Q										
All Applicable (see Pt.A, Standard Observations Sec C.5)		D			D			M	E	E			
Bottom Sediment Analyses and Observations													
Total Identifiable Chlorinated Hydrocarbons (mg/l & kg/day)			7) Q										
Un-ionized Ammonia as N (mg/l)								M					
Dewatered Sludge									11) D				
Daily Rainfall									D				

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour
Cont = continuous sampling
O = observation

TYPES OF STATIONS

A = treatment facility influent stations
E = waste effluent stations
C = receiving water stations
P = treatment facilities perimeter stations
OV = overflows and bypasses

FREQUENCY OF SAMPLING

E = each occurrence
H = once each hour
D = once each day
W = once each week
M = once each month
Y = once each year

2/H = twice per hour
2/W = 2 days per week
5/W = 5 days per week
2/M = 2 days per month
2/Y = once in March and once in September
Q = quarterly, once in March, June, Sept. and December

2H = every 2 hours
2D = every 2 days
2W = every 2 weeks
3M = every 3 months
Cont = continuous

1/ During any day when bypassing occurs from any treatment unit(s) in the plant or to the emergency outfall, the monitoring program for the effluent and any nearshore discharge shall include the following in addition to the above schedule for sampling, measurement and analyses:

1. Composite sample for BOD and Total Suspended Solids.
2. Grab samples for Total Coliform, Settleable Matter and Oil and Grease.
3. Continuous monitoring of flow.
4. Continuous or every two hour monitoring of chlorine residual.

2/ Oil and Grease sampling shall consist of 3 grab samples taken at 8-hour intervals during the sampling day with each grab being collected in a glass container and analyzed separately. Results for stations A-001 and E-001 shall be expressed as a weighted average of the 3 values, based upon the instantaneous flow rates occurring at the time of each grab sample. Results for station E-002 shall be expressed as a simple average of the three values. If the plant is not staffed 24 hours per day or if the discharge does not occur continuously, then the three grab samples may be taken at approximately equal intervals during the period that the plant is staffed or during the period that discharge is made.

The 3 grab samples may be combined and analyzed as a composite sample after submittal of data acceptable to the Executive Officer that the two techniques are equivalent. In the event that sampling for oil and grease once every two weeks or less frequently shows an apparent violation of the waste discharge permit, 30-day average limitation (considering the results of one or two day's sampling as a 30-day average), then the sampling frequency shall be increased to weekly so that a true 30-day average can be computed and compliance can be determined.

3/ 5 samples per station each day at Stations C-1, 2, 3, CR-NW and CR-SE ONLY.

4/ Grab samples shall be taken on day(s) of composite sampling.

5/ Sample date for bioassay and for one of all other specified parameters at E-002 shall coincide with date and times of Calgon Corp. E-001 composite sample.

6/ If a continuous bioassay is to be run, sample may be taken from E-001 prior to disinfection instead of dechlorinating E-001 effluent.

7/ If any sample is in violation of limits, sampling shall be increased for that parameter to weekly until compliance is demonstrated in two successive samples.

- 8/ Data shall be reported using Form A (attached) or equivalent, chlorine residual analyzers shall be calibrated against grab samples as frequently as necessary to maintain accurate control and reliable operation. If an effluent violation is detected, grab samples shall be taken every 30 minutes until compliance is achieved.
- 9/ These parameters shall be tested for on the same composite sample used for the bioassay.
- 10/ Monthly sampling dates and approximate times shall coincide with receiving water monitoring conducted by the City of San Mateo and the South Bayside System Authority.
- 11/ Daily records shall be kept of the quantity and solids content of dewatered sludge disposed of and the location of disposal.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

REVISED

SELF-MONITORING PROGRAM
FOR

CITY AND COUNTY OF SAN FRANCISCO

SAN FRANCISCO INTERNATIONAL AIRPORT

INDUSTRIAL WASTE TREATMENT PLANT

NORTH BAYSIDE SYSTEM UNIT, SAN MATEO COUNTY

NPDES NO. CA 0028070

ORDER NO. 84-13 & 81-18

CONSISTS OF

PART A

AND

PART B

PART B

SAN FRANCISCO INTERNATIONAL AIRPORT IWW AND NBSU

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT AND INTAKE

<u>Station</u>	<u>Description</u>
A-001	At any point in the treatment facilities headworks at which all waste tributary to the system is present, preceding any phase of treatment, and exclusive of any return flows or process sidestreams.

B. EFFLUENT

<u>Station</u>	<u>Description</u>
E-001	At any point in the plant after disinfection between the point of discharge into the combined outfall and the point at which all waste from the treatment plant is present.
E-002	At any point in the combined outfall after dechlorination between the point of discharge into San Francisco Bay and the point at which all waste tributary to that combined outfall is present.
E-003	At the point of discharge from the southern sump (pump station No. 1).
E-004	At the point of discharge from the northern sump (pump station No. 2).

C. RECEIVING WATERS

<u>Station</u>	<u>Description</u>
C-1	At a point in San Francisco Bay located over the geometric center of the outfall's discharge ports.
C-2	At a point in San Francisco Bay located midway between C-1 and C-3.
C-3	At a point in San Francisco Bay located in the center of the waste plume.
C-50-SW	At a point in San Francisco Bay, located 50 feet southwesterly, along the outfall line shoreward from Station C-1.
C-50-NW	At a point in San Francisco Bay, located 50 feet northwesterly from Station C-1, normal to the outfall line.

C-50-NE	At a point in San Francisco Bay located 50 feet northeasterly from Station C-1, along the outfall line extended.
C-50-SE	At a point in San Francisco Bay located 50 feet southeasterly from Station C-1 normal to the outfall.
C-300-N through C-300-NW (8 stations)	At a point in San Francisco Bay located on a 300 foot radius from the geometric center of the outfall diffuser, at equidistant intervals, with Station C-300-SW located shoreward from Station C-1 at the outfall line.
C-R-NW	At a point in San Francisco Bay located approximately 1500 feet northerly from the point of discharge.
C-R-SE	At a point in San Francisco Bay, located approximately 1500 feet southeasterly from the point of discharge.

D. LAND OBSERVATIONS

<u>Station</u>	<u>Description</u>
OV-1 through OV-'n'	Bypass or overflows from manholes, pump stations, or collection system.

NOTE: Initial SMP report to include map and description of each know bypass or overflow location, and report on pump station alarms, pumping capacity, upstream storage capacity and bypass location.

Reporting - Shall be submitted monthly and include date, time, and period of each overflow or bypass and measures taken or planned to prevent future occurrences (see Part A, Section F.2).

II. SCHEDULE OF SAMPLING AND ANALYSIS

A. The schedule of sampling and analysis shall be that given as Table I.

I, Roger B. James, Executive Officer, do hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order Nos. 84-13 and 81-18.

2. Is effective on the date shown below.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

ROGER B. JAMES
Executive Officer

Effective Date: March 29, 1984

Attachments:

Table I and Legend for Table

Order No. _____

TABLE I
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS ¹⁾

Sampling Station	A-001		E-001			E-002			E-003	E-004	ALL P Sta.	ALL C Sta.
TYPE OF SAMPLE	Cont	C-24	G ⁴⁾	C-24	Cont	G	C-24	Cont	G ¹³⁾	G ¹³⁾	O	G
Flow Rate (mgd)	cont							cont	D ¹²⁾	D ¹²⁾		
BOD, 5-day, 20° C and COD (mg/l & kg/day)		2/W		2/W			5/W		M	M		
Chlorine Residual & Dosage (mg/l & kg/day)			8) 2H or cont			8) 2H or cont						
Settleable Matter (ml/1-hr. & cu. ft./day)			D			D			M	M		
Total Suspended Matter (mg/l & kg/day)		2/W		5/W			5/W		M	M		
Oil & Grease (mg/l & kg/day)		2) M	M			2) 2M			M	M		
Coliform (Total or Fecal) (MPN/100 ml) per req't			3/W			5/W						3) M
Fish Toxicity, 96-hr. TL ₅₀ or % Survival in undiluted waste				6) M			5) M		M	M		
Ammonia Nitrogen (mg/l & kg/day)				9) M			9) M					
Nitrate Nitrogen (mg/l & kg/day)							9) M					
Nitrite Nitrogen (mg/l & kg/day)							9) M					
Total Organic Nitrogen (mg/l & kg/day)												
Total Phosphate (mg/l & kg/day)												
Turbidity (NTU)				D			M					M
pH (units)	cont		D			D			M	M		M
Dissolved Oxygen (mg/l and % Saturation)			D			D						M
Temperature (°C)			D			D						M
Apparent Color (color units)												
Secchi Disc (inches)												M
Sulfides (if DO < 5.0 mg/l) Total & Dissolved (mg/l)						D						M
Arsenic (mg/l & kg/day)				7) M								
Cadmium (mg/l & kg/day)				7) M								
Chromium, Total (mg/l & kg/day)				7) M								
Copper (mg/l & kg/day)				7) M								
Cyanide (mg/l & kg/day)				7) M								
Silver (mg/l & kg/day)				7) Q								
Lead (mg/l & kg/day)				7) M								

TABLE I (continued)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A-001		E-001			E-002		All OV Sta.	E-003	E-004	All P Sta.	All C Sta.	
TYPE OF SAMPLE	C-24		G	C-24	Cont	G	C-24		G	G	O	G	
Mercury (mg/l & kg/day)				7) M									
Nickel (mg/l & kg/day)				7) M									
Zinc (mg/l & kg/day)				7) M									
PHENOLIC COMPOUNDS (mg/l & kg/day)				7) M									
All Applicable Standard Observations				D		D		E	12) M	12) M	M	M	
Bottom Sediment Analyses and Observations													
Total Identifiable Chlorinated Hydrocarbons (mg/l & kg/day)				7) Q									
Non-dissociated Ammonium hydrocarbon as N (mg/l)												M	
Total Organic Carbon									M	M			
Dewatered Sludge											11) D		
Daily Rainfall											D		

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour
Cont = continuous sampling
O = observation

TYPES OF STATIONS

A = treatment facility influent stations
E = waste effluent stations
C = receiving water stations
P = treatment facilities perimeter stations
L = basin and/or pond levee stations
OV = Overflows and Bypasses

FREQUENCY OF SAMPLING

E = each occurrence
H = once each hour
D = once each day
W = once each week
M = once each month
Y = once each year

2/H = twice per hour
2/W = 2 days per week
5/W = 5 days per week
2/M = 2 days per month
2/Y = once in March and
once in September
Q = quarterly, once in
March, June, Sept.
and December

2H = every 2 hours
2D = every 2 days
2W = every 2 weeks
3M = every 3 months
Cont = continuous

1/ During any day when bypassing occurs from any treatment unit(s) in the plant or to the emergency outfall, the monitoring program for the effluent and any nearshore discharge shall include the following in addition to the above schedule for sampling, measurement and analyses:

1. Composite sample for BOD and Total Suspended Solids.
2. Grab samples for Total Coliform, Settleable Matter and Oil and Grease.
3. Continuous monitoring of flow.
4. Continuous or every two hour monitoring of chlorine residual.

2/ Oil and Grease sampling shall consist of 3 grab samples taken at 8-hour intervals during the sampling day with each grab being collected in a glass container and analyzed separately. Results for stations A-001 and E-001 shall be expressed as a weighted average of the 3 values, based upon the instantaneous flow rates occurring at the time of each grab sample. Results for station E-002 shall be expressed as a simple average of the three values. If the plant is not staffed 24 hours per day or if the discharge does not occur continuously, then the three grab samples may be taken at approximately equal intervals during the period that the plant is staffed or during the period that discharge is made.

The 3 grab samples may be combined and analyzed as a composite sample after submittal of data acceptable to the Executive Officer that the two techniques are equivalent. In the event that sampling for oil and grease once every two weeks or less frequently shows an apparent violation of the waste discharge permit, 30-day average limitation (considering the results of one or two day's sampling as a 30-day average), then the sampling frequency shall be increased to weekly so that a true 30-day average can be computed and compliance can be determined.

3/ 5 samples per station each day at Stations C-1, 2, 3, CR-NW and CR-SE ONLY.

4/ Grab samples shall be taken on day(s) of composite sampling.

5/ Sample date for bioassay and for one of all other specified parameters at E-002 shall coincide with date and times of Calgon Corp. E-001 composite sample.

6/ If a continuous bioassay is to be run, sample may be taken from E-001 prior to disinfection instead of dechlorinating E-001 effluent.

7/ If any sample is in violation of limits, sampling shall be increased for that parameter to weekly until compliance is demonstrated in two successive samples.

- 8/ Data shall be reported using Form A (attached) or equivalent, chlorine residual analyzers shall be calibrated against grab samples as frequently as necessary to maintain accurate control and reliable operation. If an effluent violation is detected, grab samples shall be taken every 30 minutes until compliance is achieved.
- 9/ These parameters shall be tested for on the same composite sample used for the bioassay.
- 10/ Monthly sampling dates and approximate times shall coincide with receiving water monitoring conducted by the City of San Mateo and the South Bayside System Authority.
- 11/ Daily records shall be kept of the quantity and solids content of dewatered sludge disposed of and the location of disposal.
- 12/ To be recorded daily during wet weather months (October-April) and weekly during dry weather from pump run times (hour meters). Visual observations of the appearance of any liquid in the sumps shall be made and recorded at the times the hour meters are checked. Sumps to be inspected for and cleaned of any organic settled solids in May and September of each year.
- 13/ Samples shall be taken using an automatic sampler capable of collecting discrete, consecutive samples in glass bottles. Samplers shall commence sampling when the lead discharge pump commences pumping. Proposed frequency and duration of sampler operation shall be submitted to and approved by the Executive Officer. The number of discrete samples to be taken and analyzed shall also be so approved.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

REVISED

SELF-MONITORING PROGRAM
FOR

CITIES OF SOUTH SAN FRANCISCO AND SAN BRUNO

NORTH BAYSIDE SYSTEM UNIT

SAN MATEO COUNTY

NPDES NO. CA 0038130

ORDER NO. 84-13 & 82-16

CONSISTS OF

PART A, dated January 1978

AND

PART B

PART B

CITIES OF SOUTH SAN FRANCISCO AND SAN BRUNO AND NBSU

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT AND INTAKE

<u>Station</u>	<u>Description</u>
A-001	At any point in the treatment facilities headworks at which all waste tributary to the system is present, preceding any phase of treatment, and exclusive of any return flows or process sidestreams.

B. EFFLUENT

<u>Station</u>	<u>Description</u>
E-001	At any point in the plant after disinfection between the point of discharge into the combined outfall and the point at which all waste from the treatment plant is present.
E-002	At any point in the combined outfall after dechlorination between the point of discharge into San Francisco Bay and the point at which all waste tributary to that combined outfall is present.

C. RECEIVING WATERS

<u>Station</u>	<u>Description</u>
C-1	At a point in San Francisco Bay located over the geometric center of the outfall's discharge ports.
C-2	At a point in San Francisco Bay located midway between C-1 and C-3.
C-3	At a point in San Francisco Bay located in the center of the waste plume.
C-50-SW	At a point in San Francisco Bay, located 50 feet southwesterly, along the outfall line shoreward from Station C-1.
C-50-NW	At a point in San Francisco Bay, located 50 feet northwesterly from Station C-1, normal to the outfall line.

C-50-NE	At a point in San Francisco Bay located 50 feet northeasterly from Station C-1, along the outfall line extended.
C-50-SE	At a point in San Francisco Bay located 50 feet southeasterly from Station C-1 normal to the outfall.
C-300-N through C-300-NW (8 stations)	At a point in San Francisco Bay located on a 300 foot radius from the geometric center of the outfall diffuser, at equidistant intervals, with Station C-300-SW located shoreward from Station C-1 at the outfall line.
C-R-NW	At a point in San Francisco Bay located approximately 1500 feet northerly from the point of discharge.
C-R-SE	At a point in San Francisco Bay, located approximately 1500 feet southeasterly from the point of discharge.

D. LAND OBSERVATIONS

<u>Station</u>	<u>Description</u>
P-1 through P-'n'	Located along the periphery of the waste treatment or disposal facilities, at equidistant intervals, not to exceed 100 feet. (A sketch showing the locations of these stations will accompany each report).

E. OVERFLOWS AND BYPASSES

<u>Station</u>	<u>Description</u>
OV-1 through OV-'n'	Bypass or overflows from manholes, pump stations, or collection system.

NOTE: Initial SMP report to include map and description of each known bypass or overflow location, and report on pump station alarms, pumping capacity, upstream storage capacity and bypass location.

Reporting - Shall be submitted monthly and include date, time, and period of each overflow or bypass and measures taken or planned to prevent future occurrences (see Part A, Section F.2).

II. SCHEDULE OF SAMPLING AND ANALYSIS

- A. The schedule of sampling and analysis shall be that given as Table I.

I, Roger B. James, Executive Officer, do hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 84-13 and 82-16.
2. Is effective on the date shown below.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

ROGER B. JAMES
Executive Officer

Effective Date: March 29, 1984

Attachments:

Table I and Legend for Table

TABLE I
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS ¹⁾

Sampling Station	A-001	E-001			E-002			All Sta	All Sta					
TYPE OF SAMPLE	C-24	G 4)	C-24 4)	Cont	G	C-24 5/	Cont	G 10)	O					
Flow Rate (mgd)				Cont			Cont		D 11)					
BOD, 5-day, 20° C, or COD (mg/l & kg/day)	3/W		5/W			5/W								
Chlorine Residual & Dosage (mg/l & kg/day)		2H	8) or Cont		2H	8) or Cont								
Settleable Matter (ml/1-hr. & cu. ft./day)		D			D									
Total Suspended Matter (mg/l & kg/day)	3/W		D			5/W								
Oil & Grease (mg/l & kg/day)	2) 2/M	2/ 2/M			2/ 2M									
Coliform (Total or Fecal) (MPN/100 ml) per req't		3/W			5/W			M 3/						
Fish Toxicity, 96-hr. TL ₅₀ or % Survival in undiluted waste			6) M			5/ M								
Total Ammonia-N (mg/l & kg/day)			9) M			9) M								
Nitrate Nitrogen (mg/l & kg/day)						9) M								
Nitrite Nitrogen (mg/l & kg/day)						9) M								
Total Organic Nitrogen (mg/l & kg/day)														
Total Phosphate (mg/l & kg/day)														
Turbidity (NTU)			D			M		M						
pH (units)		D			D			M						
Dissolved Oxygen (mg/l and % Saturation)		D			D			M						
Temperature (°C)		D			D			M						
Apparent Color (color units)														
Secchi Disc (inches)								M						
Sulfides (if DO < 5.0 mg/l) Total & Dissolved (mg/l)		D			D			M						
Arsenic (mg/l & kg/day)			7) M											
Cadmium (mg/l & kg/day)			7) M											
Chromium, Total (mg/l & kg/day)			7) M											
Copper (mg/l & kg/day)			7) M											
Cyanide (mg/l & kg/day)			7) M											
Silver (mg/l & kg/day)			7) M											
Lead (mg/l & kg/day)			7) M											

TABLE I (continued)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A-001	E-001			E-002			All C Sta	All P Sta	All OV Sta			
TYPE OF SAMPLE	C-24	G	C-24	Cont	G	C-24	Cont	G	O				
Mercury (mg/l & kg/day)			7) M										
Nickel (mg/l & kg/day)			7) M										
Zinc (mg/l & kg/day)			7) M										
PHENOLIC COMPOUNDS (mg/l & kg/day)			7) M										
All Applicable (see Pt. A, Standard Observations Sec C.5)		D			D			M	E	E			
Bottom Sediment Analyses and Observations													
Total Identifiable Chlorinated Hydrocarbons (mg/l & kg/day)			7) M										
Un-ionized Ammonia as N (mg/l)								M					
Dewatered Sludge									12) D				
Daily Rainfall									D				

LEGEND FOR TABLE

TYPES OF SAMPLES

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O = observation

TYPES OF STATIONS

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P = treatment facilities perimeter stations
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Q = quarterly, once in March, June, Sept. and December

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1/ During any day when bypassing occurs from any treatment unit(s) in the plant or to the emergency outfall, the monitoring program for the effluent and any nearshore discharge shall include the following in addition to the above schedule for sampling, measurement and analyses:

1. Composite sample for BOD and Total Suspended Solids.
2. Grab samples for Total Coliform, Settleable Matter and Oil and Grease.
3. Continuous monitoring of flow.
4. Continuous or every two hour monitoring of chlorine residual.

2/ Oil and Grease sampling shall consist of 3 grab samples taken at 8-hour intervals during the sampling day with each grab being collected in a glass container and analyzed separately. Results for stations A-001 and E-001 shall be expressed as a weighted average of the 3 values, based upon the instantaneous flow rates occurring at the time of each grab sample. Results for station E-002 shall be expressed as a simple average of the three values. If the plant is not staffed 24 hours per day or if the discharge does not occur continuously, then the three grab samples may be taken at approximately equal intervals during the period that the plant is staffed or during the period that discharge is made.

The 3 grab samples may be combined and analyzed as a composite sample after submittal of data acceptable to the Executive Officer that the two techniques are equivalent. In the event that sampling for oil and grease once every two weeks or less frequently shows an apparent violation of the waste discharge permit, 30-day average limitation (considering the results of one or two day's sampling as a 30-day average), then the sampling frequency shall be increased to weekly so that a true 30-day average can be computed and compliance can be determined.

3/ 5 samples per station each day at Stations C-1, 2, 3, CR-NW and CR-SE ONLY.

4/ Grab samples shall be taken on day(s) of composite sampling.

5/ Sample date for bioassay and for one of all other specified parameters at E-002 shall coincide with date and times of Calgon Corp. E-001 composite sample.

6/ If a continuous bioassay is to be run, sample may be taken from E-001 prior to disinfection instead of dechlorinating E-001 effluent.

7/ If any sample is in violation of limits, sampling shall be increased for that parameter to weekly until compliance is demonstrated in two successive samples.

- 8/ Data shall be reported using Form A (attached) or equivalent, chlorine residual analyzers shall be calibrated against grab samples as frequently as necessary to maintain accurate control and reliable operation. If an effluent violation is detected, grab samples shall be taken every 30 minutes until compliance is achieved.
- 9/ These parameters shall be tested for on the same composite sample used for the bioassay.
- 10/ Monthly sampling dates and approximate times shall coincide with receiving water monitoring conducted by the City of San Mateo and the South Bayside System Authority.
- 11/ All flow sent to or received from Tillo shall be reported.
- 12/ Daily records shall be kept of the quantity and solids content of dewatered sludge disposed of and the location of disposal.